



## X-Plain™ Arthritis

### Reference Summary

Arthritis is a very common condition. The different forms of arthritis affect nearly 43 million Americans, or about one of every six people, making it one of the most prevalent diseases in the United States.

There are more than 100 types of arthritis. The most common types of arthritis are osteoarthritis and rheumatoid arthritis.

This reference summary explains certain arthritic conditions and their treatment options.

#### Anatomy

Our bones help us stand up straight and our muscles help our bones to move together.

Bones connect at the joints. The most obvious joints are the shoulders, elbows, wrists, hips, knees, and ankles.

We have joints between the different bones of our fingers and toes. We also have joints that allow our vertebrae to move.

A material called *cartilage*, which keeps the bones from rubbing against each other during motion, covers the ends of the bones of a joint.



There is a little bag containing a small amount of fluid called *synovium* between the two pieces of cartilage in a joint.

The combination of cartilage and synovium allows for smooth, painless motion in any given joint.

#### Arthritis

Arthritis occurs when the cartilage and the synovium in

joints is destroyed. There are many types of arthritis.

*Osteoarthritis* is due to chronic wear and tear. Osteoarthritis is more common in older people.

*Post-traumatic arthritis* is due to trauma to a joint. Trauma may happen during a car accident, sports injury, etc.

If the synovium in a joint becomes inflamed, it could end up being destroyed as well as the underlying joint. This destruction is called *rheumatoid arthritis*.

Arthritis usually leads to pain and limited movement in the joint.

Rheumatoid arthritis involves swelling, redness, and tenderness in the joint.

#### Signs & Symptoms

All types of arthritis involve destruction of the joints, which typically causes pain as well as deformity of the joint.

When arthritis is very severe, both bones of the joint may actually grow into each other, causing them to fuse together.

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Rheumatoid arthritis leads to swelling, redness, and tenderness in the affected joints.

The joints most commonly affected by **osteoarthritis** include the ones

- between the fingers
- between the vertebrae
- in the hips
- in the knees
- in the wrists

The joints most commonly affected by **rheumatoid** arthritis include the ones

- between the palm of the hands and the fingers
- between the vertebrae
- in the hips
- in the knees
- in the wrists

Arthritis causes pain, deformity, and inability to control the joint. It can lead to abnormal curvature of the spine called scoliosis, which can cause pinched nerves.

### Causes

Osteoarthritis occurs due to repetitive use of the joints. For this reason, it is more common in weight-bearing joints, such as hips and knees.



Repetitive use of the joints leads to wear and tear on the cartilage in the joint.

Grinding and crackling sounds come from affected joints when they move.

Obesity makes osteoarthritis worse because it puts more stress on the joints involved.

The cause of rheumatoid arthritis is unknown.

In rheumatoid arthritis, the immune system of the body attacks the synovium of the joint, destroying the joint.

Rheumatoid arthritis appears to run in some families.

Some kinds of arthritis can cause problems in the eyes or organs in the chest. Some kinds of arthritis affect the skin, also.

Certain arthritis-like conditions are present in diseases

such as lupus, gout, and hepatitis.

### Diagnosis

Arthritis is diagnosed with a complete medical history and a physical examination.

Blood tests can detect some of the antibodies responsible for rheumatoid arthritis and lupus. These antibodies are special chemicals made by the immune system to defend the body from bacteria and viruses. Doctors believe that in rheumatoid arthritis and lupus, the immune system mistakes parts of the joints for foreign material and attacks them!

Certain blood tests can detect high levels of uric acid in the blood, which is the cause of gout. Gout is a disease that causes arthritis-like conditions.

At times, fluid may need to be taken out of inflamed or swollen joints to determine the cause of the arthritis.

X-rays, CAT scans, and MRIs are very useful in determining the condition of the joints.

### Treatment

Unfortunately, there is no cure for most types of arthritis.

Arthritis can be slowed and controlled with various medi-

cations that decrease inflammation in the body.

Some medications used to fight arthritis are common, over-the-counter drugs. Examples include ibuprofen and naproxen.

Stronger medications can be used to treat arthritis. These include various types of steroids. Steroids are very helpful medications but they have numerous possible side effects.

Steroids should be taken as prescribed, and should never be stopped without talking to a doctor first.

Sometimes medications used to treat cancer can reduce inflammation caused by rheumatoid arthritis.

Physical therapy may be used to keep joints affected by arthritis in shape.

Splints are commonly used to prevent, slow down, or make up for joint deformities.



If other treatments are unsuccessful, surgery to fuse or replace joints may stop deformation and increase use of the joint. For example, an unresponsive wrist can cause the hand to be almost useless. If an unresponsive wrist is fused in place, then the hand can be used effectively again.

Sometimes surgery can take pressure off the spinal cord or nerves in the spine.

### **Summary**

Arthritis is a common disease that affects one in six Americans.

Recent medical and surgical advances have helped in slowing down arthritis and preventing significant disability.

Aside from treatments, a good attitude and willingness to fight the disease and remaining active are very helpful for a good outcome.

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